

DaneCom SITREP

What we are doing

&

What you need to know/do

Agenda

- Please check in via the sign-in sheet
- County Executive kick-off
- System description w/focus on expansions
- What is left to accomplish by Harris (by Nov 1, 2016)
- What users need to do to be ready (by Nov 1, 2016)
 - Programming of radios
 - Training, practice in radio operation
 - fine-tuning of protocols by workgroups
- Questions/Answers
- Break
- Programming, other technical information and Q&A

Kick-off

Welcome Joe Parisi; County Executive

System Description

- Coverage
- Capacity
- Reliability
- Interoperability
- Features
- Cost control

(these items have been what you've asked for)

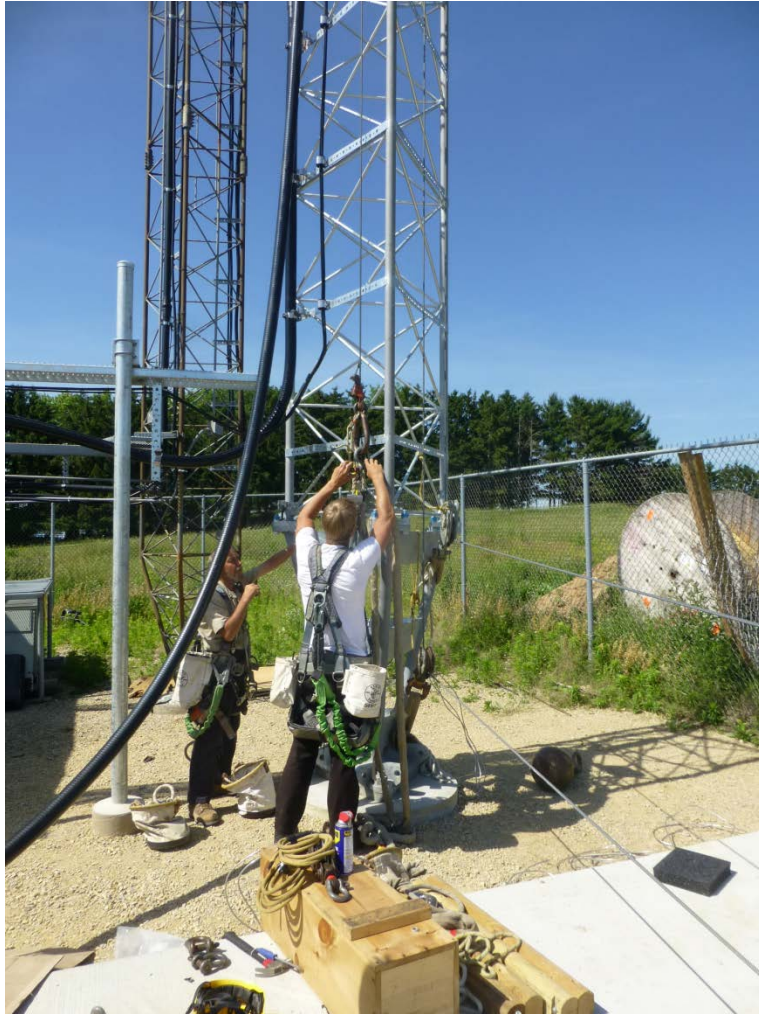
DaneCom Coverage

- Enhanced coverage due to:
 - 3 new sites; and one re-located (photos follow)
 - Better antennae (minor, but important)
 - ISSI (inter-subsystem interface) with
 - WISCOM
 - Madison 800 MHz system (coming)
 - Following maps show the detail, by sub-system

DeForest (State Patrol Post)



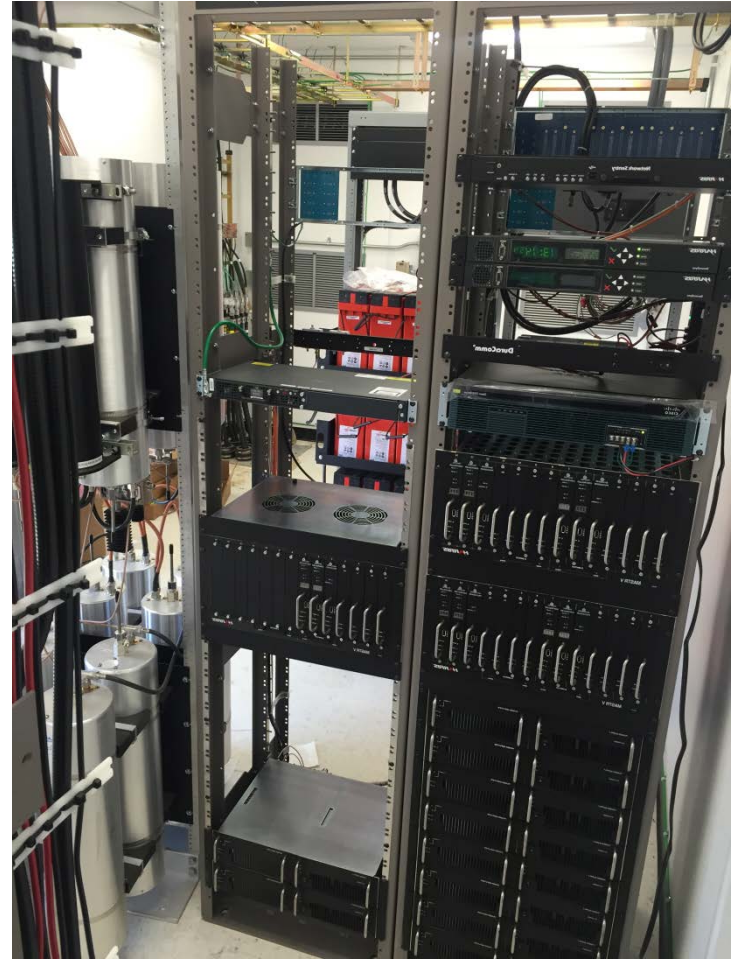
Deerfield (WJJO)



Rockdale



Stoughton (Racetrack Rd)



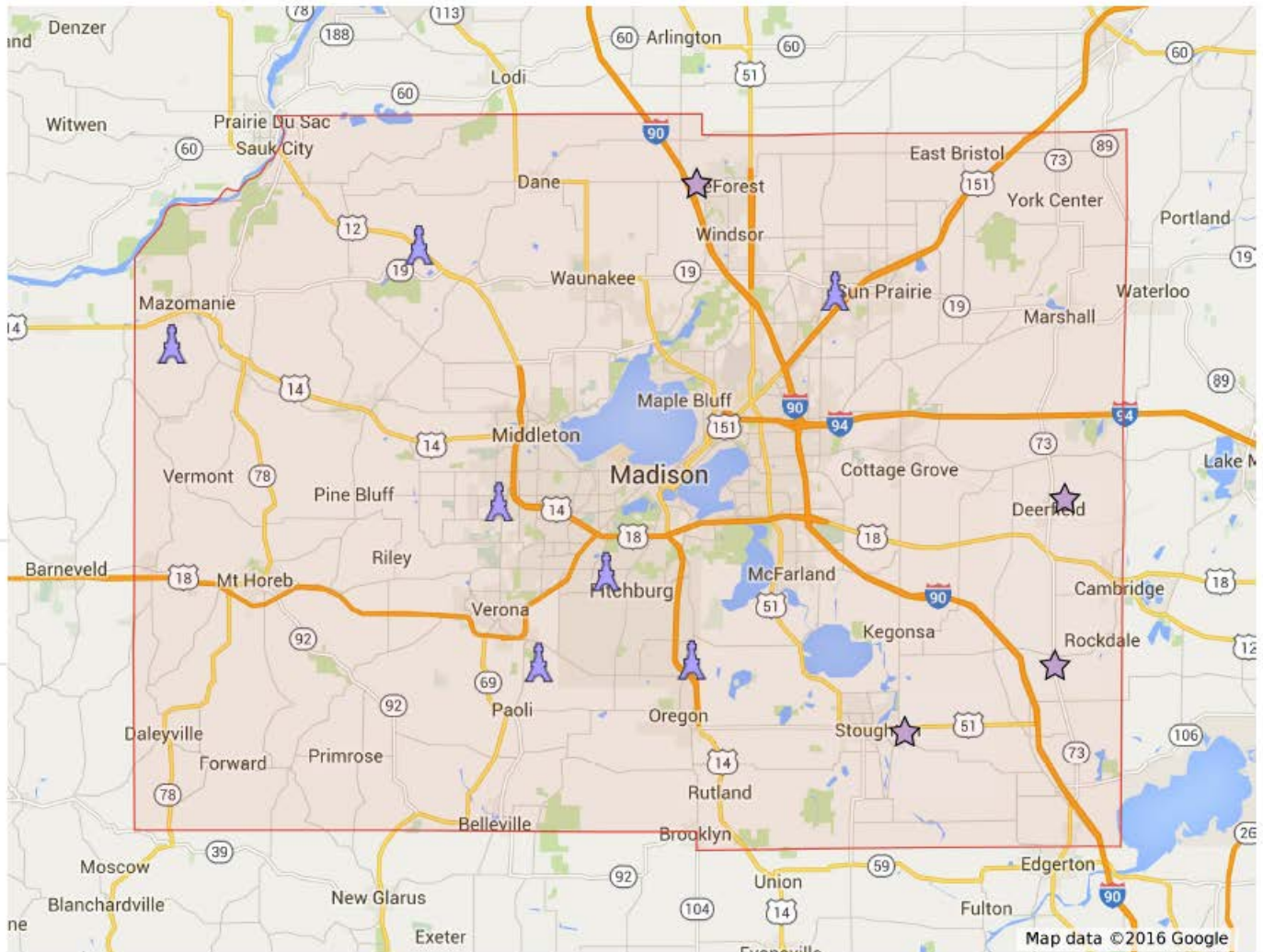
DaneCom P25

DaneCom P25

- ★ DeForest
- ♁ Eisner
- ♁ McKee
- ★ Rockdale
- ♁ Roxbury
- ★ Stoughton - WT
- ♁ Sun Prairie
- ♁ Verona
- ♁ UW
- ★ WJJO
- ♁ WMGN

Dane County Outline

- ♁ Dane



DaneCom & WISCOM P25

DaneCom P25

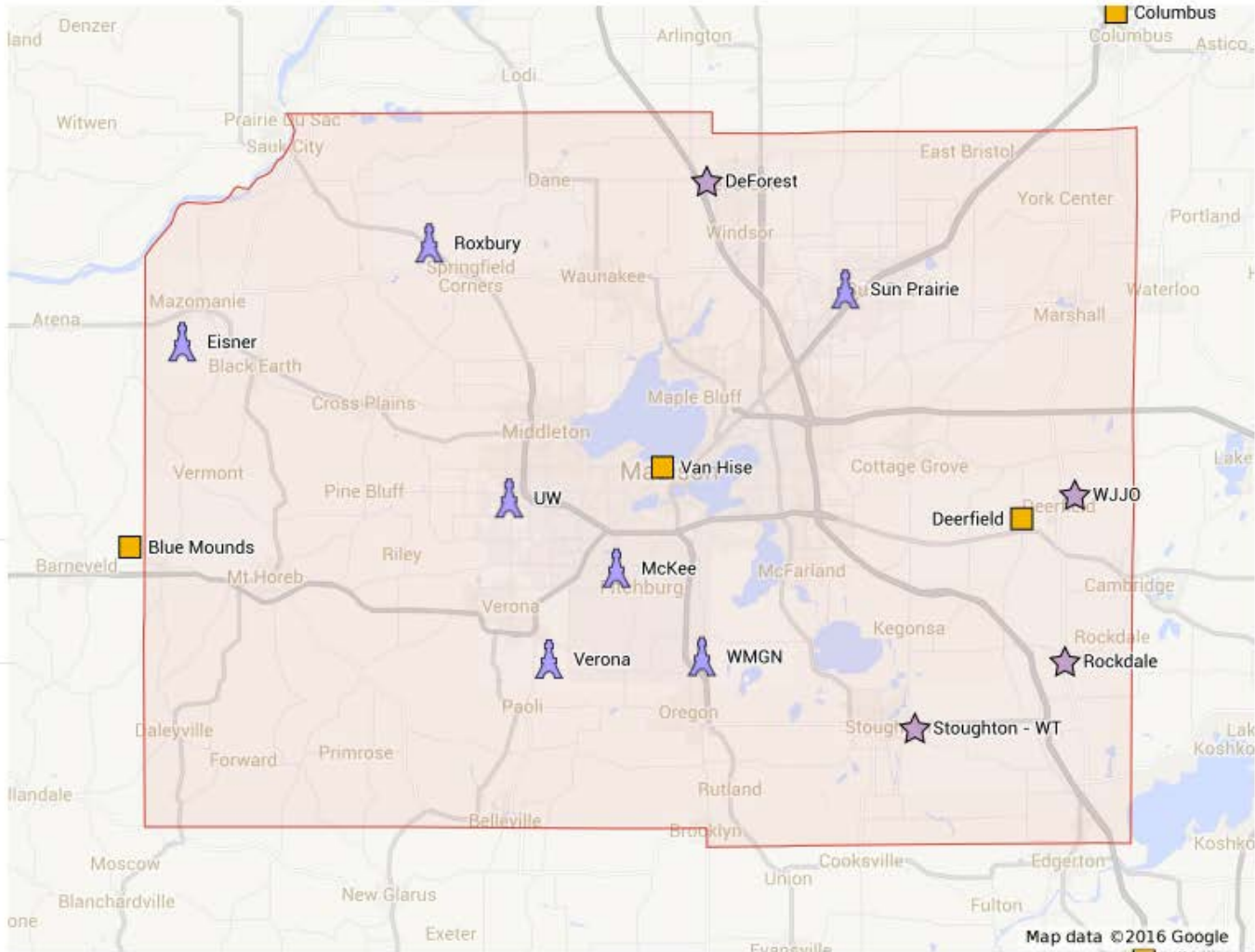
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Dane County Outline

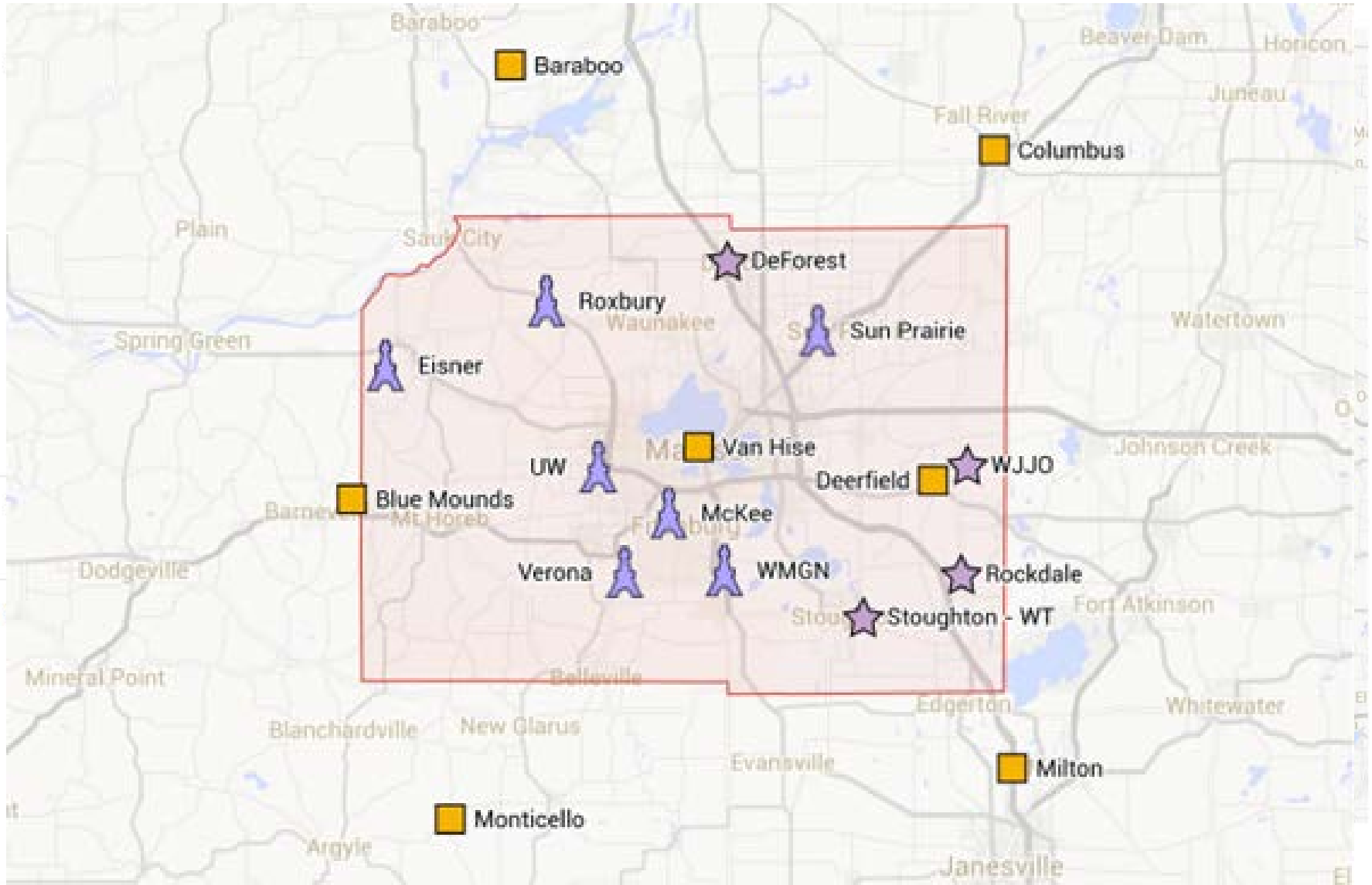
- 🗺 Dane

WISCOM

- 🟡 Deerfield
- 🟡 Blue Mounds
- 🟡 Baraboo
- 🟡 Van Hise
- 🟡 Columbus
- 🟡 Milton
- 🟡 Monticello



DaneCom & WISCOM P25



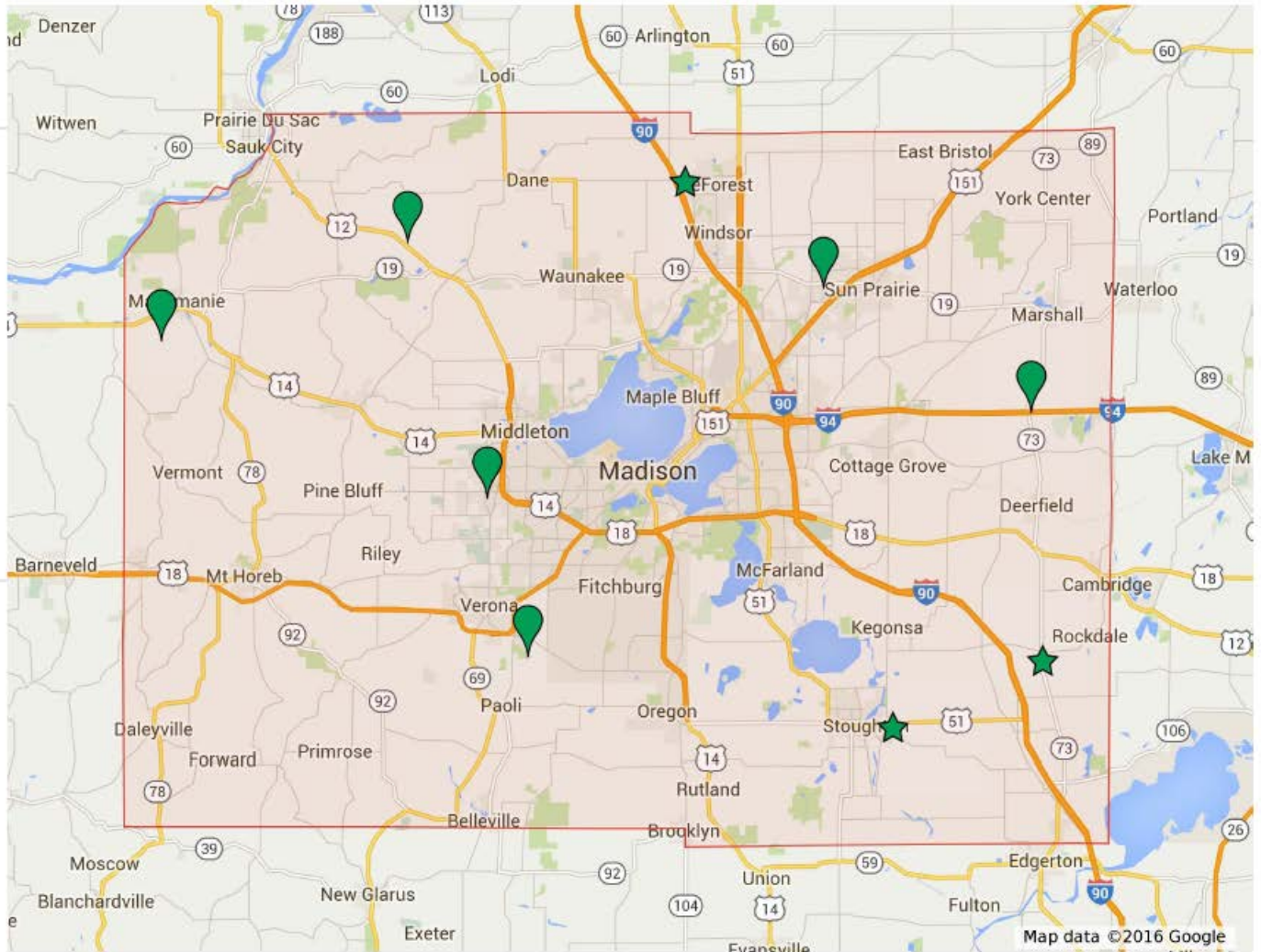
Paging

Dane County Outline



Paging

- Deerfield
- DeForest
- Eisner
- Rockdale
- Roxbury
- Stoughton
- Sun Prairie
- UW
- Verona



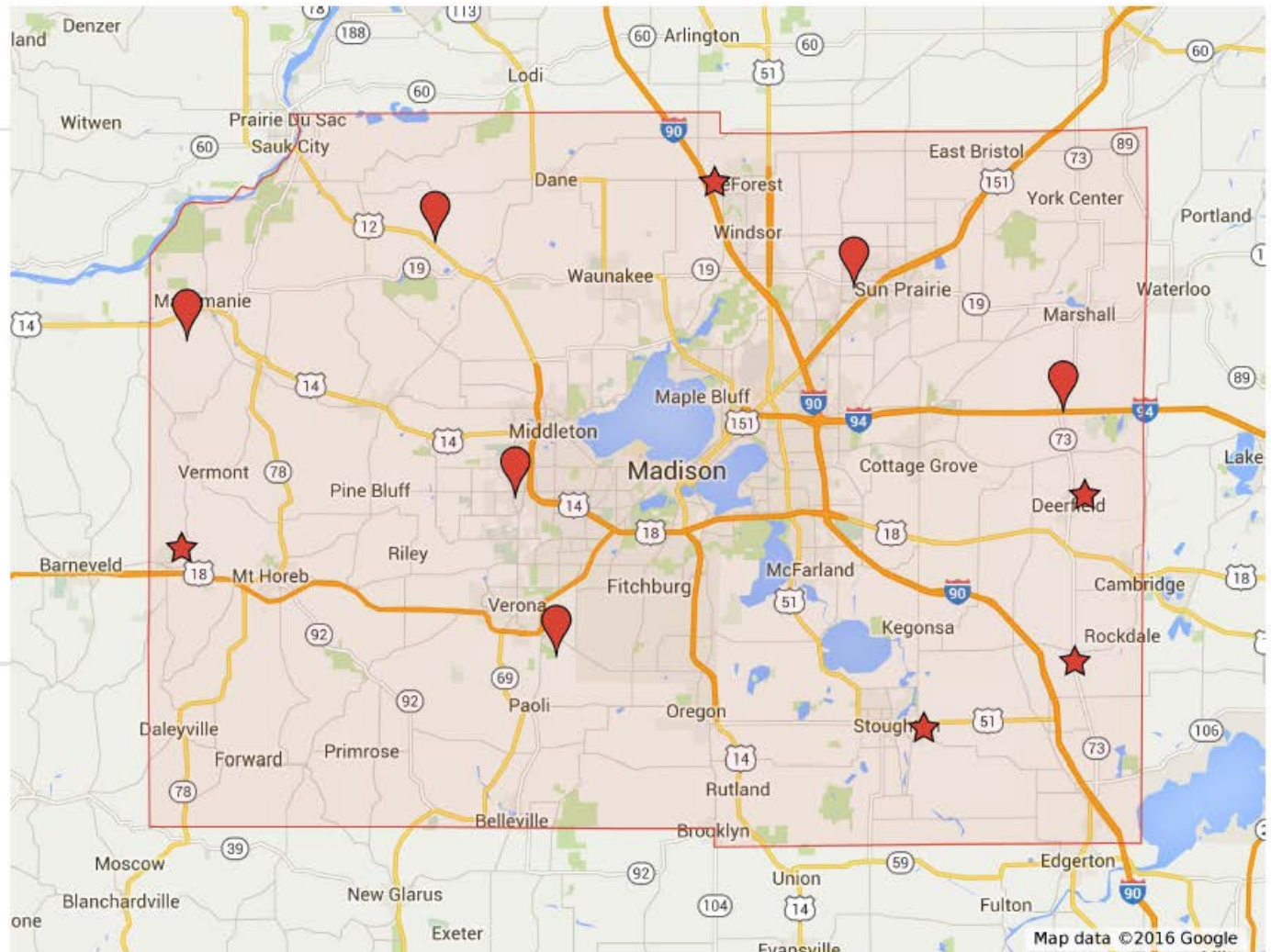
Analog Tactical

Dane County Outline



Analog Tactical

- ★ Brigham
- 📍 Deerfield
- ★ DeForest
- 📍 Eisner
- ★ Rockdale
- 📍 Roxbury
- ★ Stoughton
- 📍 Sun Prairie
- 📍 UW
- 📍 Verona
- ★ WJJO



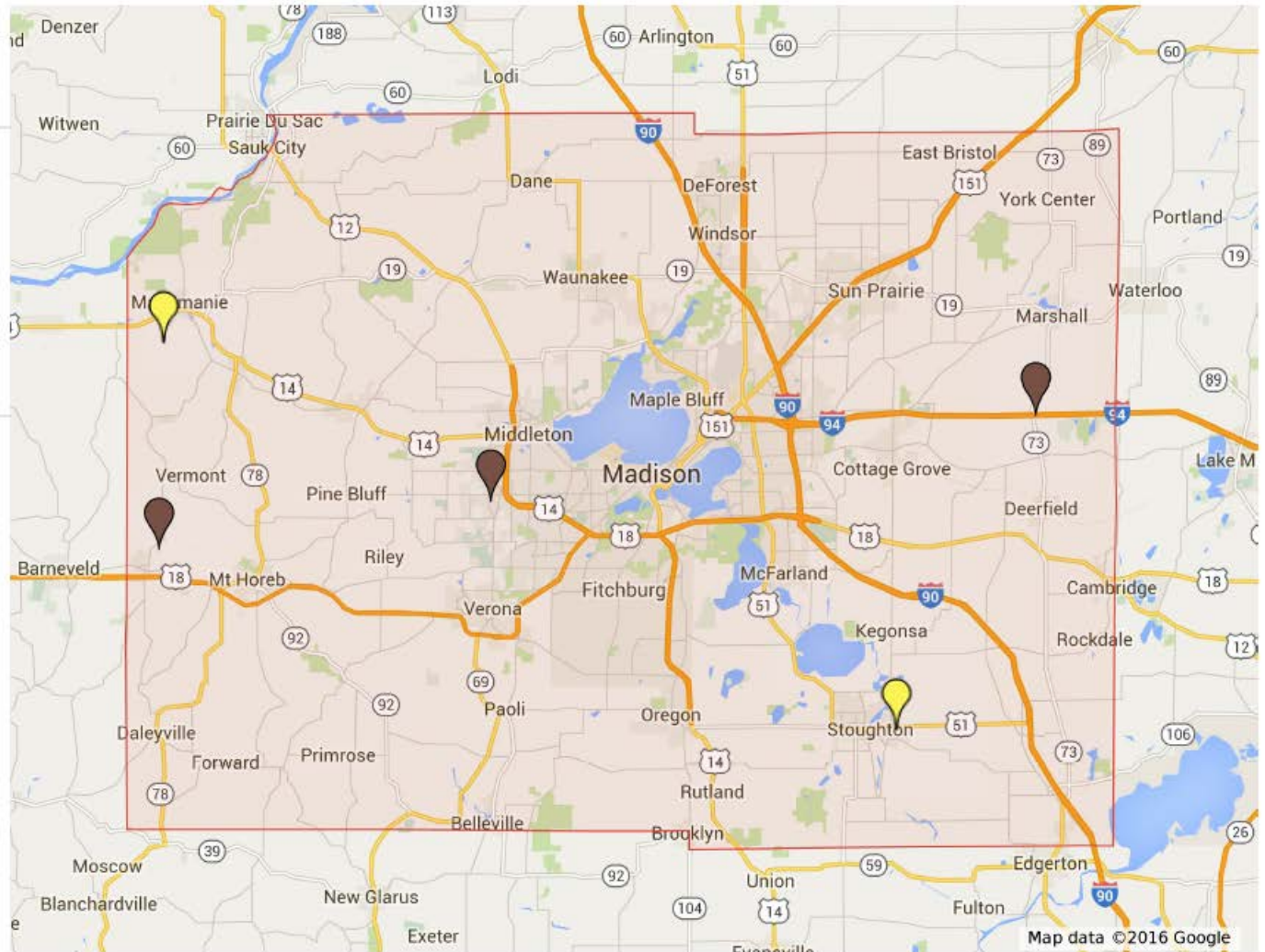
Mutual Aid

Dane County Outline



Mutual Aid

- Brigham (TX/RX)
- Deerfield (TX/RX)
- Eisner (RX)
- Stoughton (RX)
- UW (TX/RX)

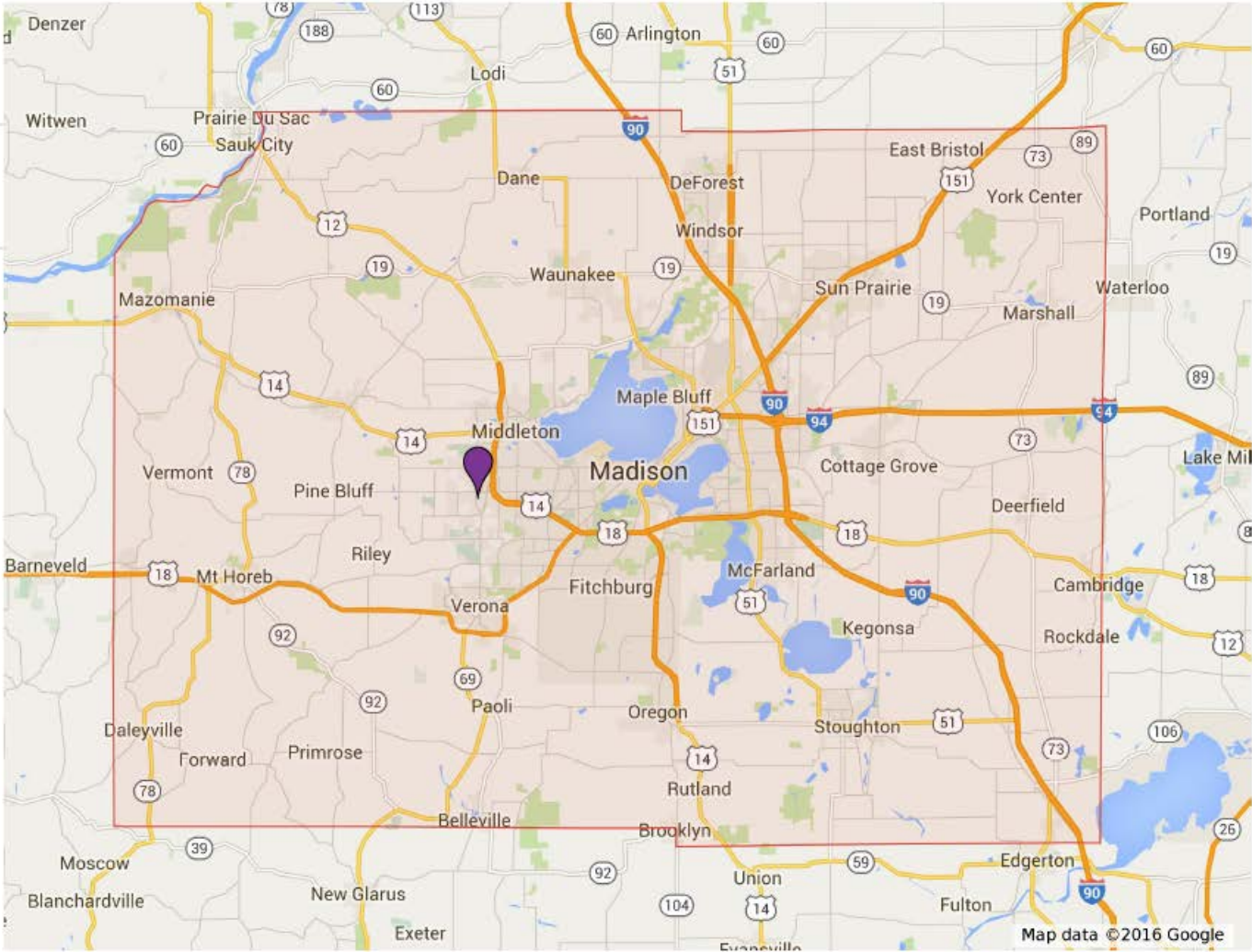


EMS-B

Dane County Outline



EMS-B (Dane)

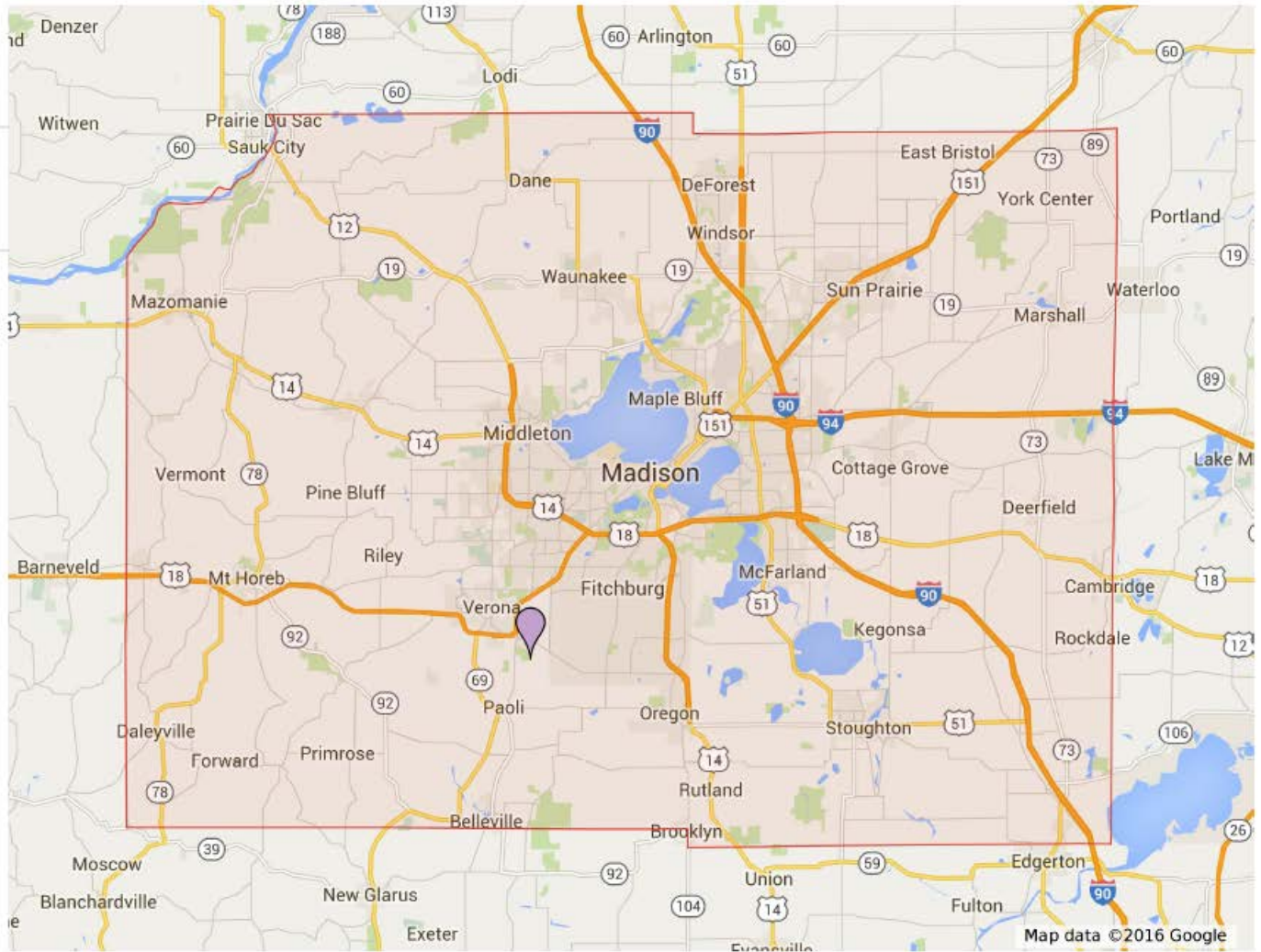


Point to Point

Dane County Outline



Point to Point



Capacity

- 10 TRS channels as planned
 - However, what is new is better frequency spread via new NTIA (Federal) frequencies (final FCC approval is forthcoming, but virtually assured)
 - We'll come back to this during programming/testing discussions
- Second Analog Tactical Channel

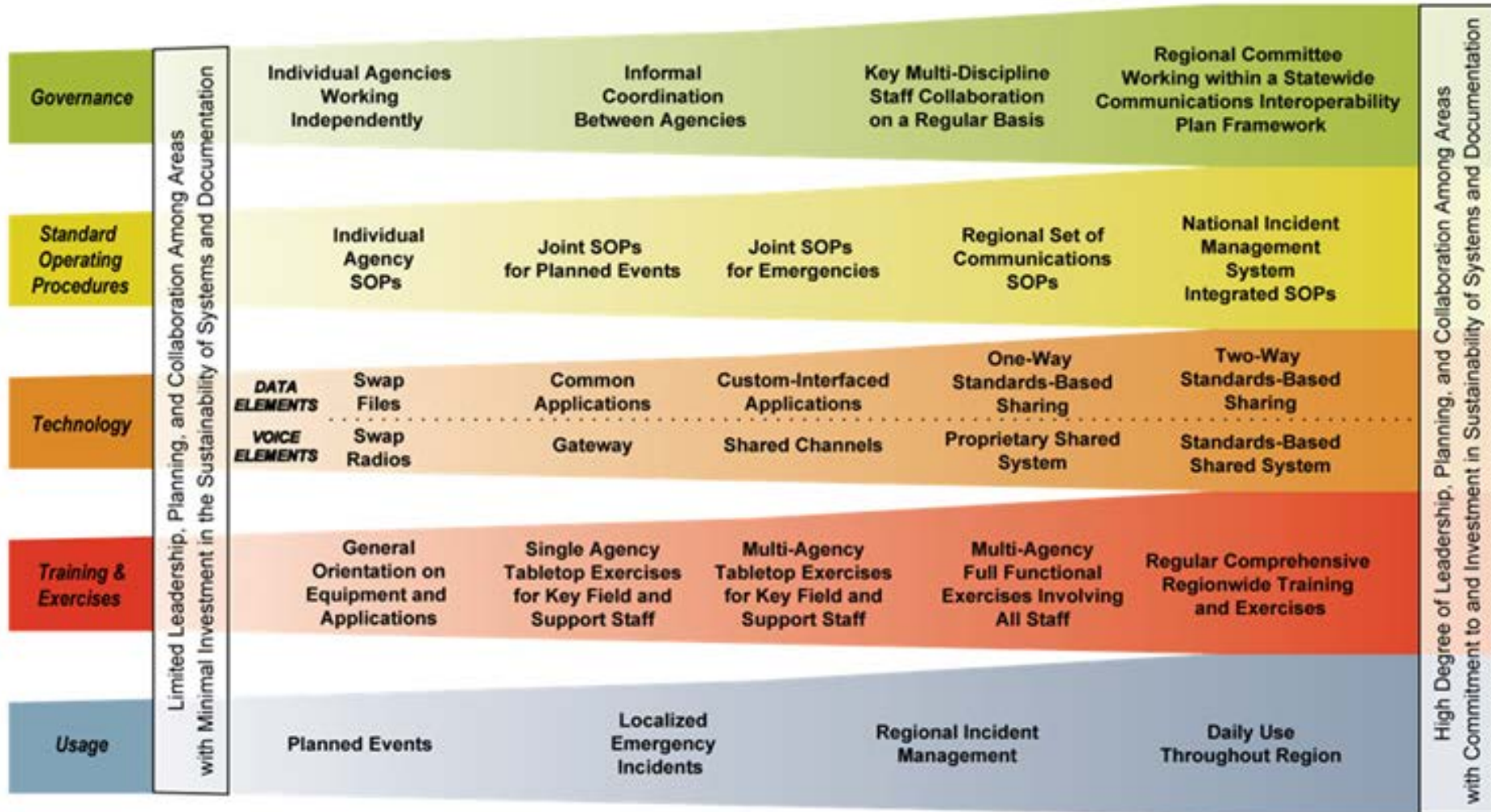
Reliability

- Distributed Control Point (DCP) replaced the second IPCP (IP Control Point) at UW
 - Control Point handles transmitter simulcast and receiver voting
- Latest/greatest hardware and software now part of the system (silver lining: pause caused by expansion gives us more current HW/SW)
 - SR10A.1 software
 - Hardware virtualization

Interoperability

- ISSI (mentioned in coverage) affords the best we can do with disparate systems...DaneCom, WISCOM, City of Madison 800 MHz
 - Cooperative ISSI setup and testing is still ongoing between Harris and WISCOM/EFJ
 - WISCOM ISSI connectivity is expected to be available at the time of cutover
 - Madison ISSI as early as 2017 in connection with their upgrades
- Apprehending all benefits of the P25 standards that are available for/with that combo of vendors and systems.
- DaneCom is an important – but one – piece of interoperability

Interoperability Continuum



Interoperability

- DaneCom treats one half of one lane of the continuum and over a particular geographic area.
- DaneCom has various connections and relationships with - but does not own or manage - other area systems including City of Madison Smartnet, WISCOM P25, numerous city and village subsystems nor adjacent counties

Features

- BeOn[®] PTT infrastructure (purchased by County)
 - can be used for non-mission-critical group and/or individual calls, separately or in addition to actual radios
 - substitute for telephone interconnect (phone with some radio versus radio with some phone)
- Symphony consoles with backup radios
 - Ten PSC backup center positions

Cost considerations

- All capital costs of expansion borne by County
- Operations and maintenance (O&M) costs of new sites borne by County
- REALLY expensive lease outside Stoughton has been abandoned; will directly reduce the recurring/O&M costs billed to DaneCom members (recall: members pay 70%, county pays 30%...for the original sites/equipment)

July - September

- July: Finish equipment installation and start system optimization
- August: Finish system optimization and start system testing (coverage)
 - Programmer radio testing and user practice can start the week of the 15th.
 - DAQ testers are needed and welcome the week of August 29th. Please save the dates, and let Chad Fleck know to what you can commit.
- Sept: Finish coverage testing and conduct functional testing

October - December

- October: User training and practice
- November:
 - 1st: ***Legacy systems shut down; everyone on duty must have a programmed and tested DaneCom radio, and know how to use it***
 - 2nd - 31st : 30-day reliability test (next slide)
- December: Post-Cutover (subsequent slide)

30-day reliability measures

- On-site and remote access support from Harris Implementation Engineers, Network Engineers, and SR10A experts known as the 'Commissioning Team'
- On-site quick response support (less than 2hrs, 24/7) from GenComm who are Harris' partner and the system's 'local experts'
- 24/7 Harris Technical Assistance Center (TAC) support
 - Direct access to development engineers and product managers for quick issue resolution
- 24/7 Harris Network Operations Center (NOC) support
 - Relays all system alarms to the appropriate entity for quick response
- County (PSC/DaneCom) help desk and stakeholder check-ins

Post-cutover

- 24/7 NOC monitoring by Harris
- Daily testing by General Communications
- 1 year, 24/7 Warranty Period by GenComm
- 5 year, 24/7 Maintenance Agreement by GenComm
- Help Line and recurring stakeholder check-ins by County

Legacy Systems

- The County continues to operate, monitor and maintain
- Bi-weekly stakeholder check-ins continue, allowing additional problem communications and resolution

Legacy Systems

- ***Dane legacy systems will be shut down in connection with the November 1st DaneCom cutover:***
 - *Law 1/Dispatch, 3/Data, 5/Tactical*
 - *Fire/EMS A-Adam, B-Baker, C-Charlie, D-David, E-Edward, H-Henry*
 - *Highway*
- Paging and Siren Control were changed over some time ago, so they will remain as they are now
- Licenses will be cancelled, and some frequencies are being re-used both near and far – so do not transmit once these systems go dark (and note that PSC won't hear/answer anyhow)
- The best way is to re-program radios after cutover so as not to include these channels
- Other area systems are going through changes or being decommissioned in connection with DaneCom deployment – so watch for notices from other entities, as well

User Tasks by November 1st

- Training and practice in radio operation by agencies and associations
- Fine-tuning of protocols by workgroups
 - Main task is what/when/how to listen/talk
 - Workgroups might create and share optional and partial channel templates - but they won't answer every question and cannot be allowed to delay programming

Radio Programming Templates

- Main Classes of Radio Channels:
 - Countywide and Local Channels – DaneCom
 - Countywide and Local Channels – Conventional
 - Adjacent County Channels – Mostly Conventional
 - Statewide Mutual Aid Channels – Conventional
 - Statewide Interop Channels – WISCOM
 - Nationwide Mutual Aid Channels – Conventional
 - Nationwide Interop Channels – Conventional

Programming Parameters

- It is not possible to have all user radios across the county be identical
- Templates provide only the suggested basic core groupings of key channels
- There are numerous banks where user agencies must decide what channel combinations work best for their operations
- Our goal is to make sure that all key channels appear SOMEWHERE in every radio

Suggested Fire/EMS Base Zone Layouts

ZONE A - LOCAL COMBO

ZONE B - LOCAL COMBO

ZONE C - LOCAL COMBO

ZONE D - DANE FD/EMS MAIN

ZONE E - DANE HOSPITALS

ZONE F - DANE FIREGROUND

ZONE G - DANE LAW

ZONE H - AREA HOSPITALS

ZONE I - DANE INTEROP

ZONE J - NATIONAL FD/EMS INTEROP

ZONE K - NATIONAL VHF INTEROP

ZONE L - VHF FEDERAL INTEROP

ZONE M - MABAS

ZONE N - WISCOM FD/EMS

ZONE O - WISCOM 1

ZONE P - WISCOM 2

ZONE Q - COLUMBIA FD/EMS

ZONE R - ROCK FD/EMS

ZONE S - SAUK FD/EMS

ZONE T - GREEN LAFAYETTE

ZONE U - IOWA FD/EMS

ZONE V - JEFFERSON FD/EMS

ZONE W - LOCAL GOV'T OPTIONS

ZONE X - LOCAL GOV'T OPTIONS

ZONE Y - LOCAL GOV'T OPTIONS

ZONE Z - UNIVERSAL

ZONE # - LEGACY (TEMP)

Other Notes and Considerations

- Many brands of radios exist
 - Some models may not allow mixing of DaneCom/WISCOM/Conventional channels in the same Zone – this will require template deviations
 - Some are capable of controlling repeater channel “Talkaround” with a switch, other models require a separate programmed channel slot for this
 - Alpha numeric displays have a wide variety of character limits – short names per the state plan should fit any radio

Other Notes and Considerations

- We have limited programming information from adjacent counties
- Local government channels (both conventional and DaneCom) – pick and choose as you see fit.
 - As previously mentioned, several city/village channels have changed or will change in connection with DaneCom
- Complete list of DaneCom talk groups is available from the System Administrator

Other Notes and Considerations

- First three Zones (Local A, B, C) are designed to accommodate your daily routine operations (75 to 95% of typical radio use)
- Universal Zone
 - Designed for ANY public safety user to establish critical communications with any other user or dispatch center in a dire emergency
 - Should be located as the LAST Zone in any radio (example – Zone Z).
 - Only exception is the Legacy Zone (Zone #) which is only a temporary bridge and will eventually go away

Stakeholder Communications

- We are 112 days away from the shutdown of legacy systems
- There will be questions and minor adjustments between now and then, and we expect to at some point turn our bi-weekly radio check-ins into weekly radio check-ins
- Association participation will continue to be important to funnel information in both directions

Questions & Answers

Next is break

Second half is more technical
(including programming)

Radio Programming

- Remember, DaneCom programming parameters are a supplement to the current (revision 5, 12 Dec 2014) WISCOM Programming Guidance
- Programs can be written now - testing next slide
- Assume additional programming is inevitable due to removing legacy channels, unexpected changes, neighboring system changes, etc.

P25 & AT Frequencies as of 7/12/16

• P25-1	172.5000*	165.0500	* Was 172.55 MHz
• P25-2	172.0750	164.5750	
• P25-3	171.3500	164.4250	
• P25-4	154.8225	164.3750	MIPD on 154.815
• P25-5	154.9725	164.3125	
• P25-6	155.2425	159.0450	Highway on 159.045
• P25-7	154.0925	159.2775	154.0925 affects MIPD
• P25-8-noCC	155.5275	159.3075	MOPD/DPW left 155.52
• P25-9	154.1225	158.7750	Paging left 158.775
• P25-10-noCC	155.1825	159.2100	WNPD left 159.21
• AT-1	172.1000	166.0250	(100.0 Hz)
• AT-2	172.5875	166.2375	(123.0 Hz)

We do not expect changes, but will date any lists rather than calling them “final”.

Radio Testing

- Testing and practice will be allowed as of Monday, August 15th.
 - Highway may come on as early as this point, as well
- Three of the ten P25 channels will be available 24/7 for programmers to test profiles and ensure that radios are registering and talking on the trunked system
 - You may see the system on prior, but it should not be counted on for radio checking as Harris may be making changes in preparation for coverage testing
 - IRIMs will be mainly turned off and not passing Madison 800 MHz traffic during these periods to limit loading issues
 - As more channels become available, that information will be conveyed to you
 - Should the system be on the air with some NTIA prior, programmers will be notified of any blackout periods.

Subscriber radio considerations

- HW reminders (e.g. antennae)
- Wideband Antennas (Mobile, Portable, Base)
 - DaneCom and WISCOM together use 138 – 174 MHz
- P25 Trunking Feature

Questions & Answers (now or later)

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Thanks for attending